2-2019

Acute Pancreatitis in the Emergency Department

Gregory J. Lopez, BS  
*Thomas Jefferson University, gregory.lopez@jefferson.edu*

Matt Hall, MD  
*Beth Israel Deaconess Medical Center*

Matthew Babineau, MD  
*Dartmouth-Hitchcock Medical Center*

Darshan Kothari, MD  
*Beth Israel Deaconess Medical Center*

Ryan C. Burke, PhD, MPH  
*Beth Israel Deaconess Medical Center*

*See next page for additional authors*

**Let us know how access to this document benefits you**

Follow this and additional works at: [https://jdc.jefferson.edu/si_ctr_2021_phase1](https://jdc.jefferson.edu/si_ctr_2021_phase1)

Part of the Emergency Medicine Commons

**Recommended Citation**

Lopez, Gregory J.; Hall, Matt; Babineau, Matthew; Kothari, Darsh; Burke, Ryan; Wolfe, Richard E.; Sheth, Sunil G.; Freedman, Stephen; Shapiro, Nathan I.; and Tibbles, Carrie, "Acute Pancreatitis in the Emergency Department" (2019). SKMC JeffMD Scholarly Inquiry, Phase 1, Project 1.

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University’s Center for Teaching and Learning (CTL). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in Phase 1 by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.
Acute Pancreatitis in the Emergency Department

Gregory J. Lopez, BS; Matt Hall, MD; Matthew Babineau, MD; Darsh Kothari MD; Ryan Burke PhD; Richard E. Wolfe, MD; Sunil G. Sheth, MD; Stephen Freedman, MD; Nathan I. Shapiro, MD, MPH; Carrie Tibbles, MD

Introduction: Acute pancreatitis (AP) is a common emergency department (ED) presentation with a variety of outcomes. Stratifying AP severity with scoring systems can allow physicians to effectively manage patient disposition.

Objective: To identify ED pancreatitis patients who will likely be admitted to the ICU or be discharged within 48 hours, and to validate existing pancreatitis severity scores.

Methods: Patients with a final ED diagnosis of AP and/or lipase ≥ 3 times the upper limit of normal were enrolled in a prospective, observational chart review study. Parametric and non-parametric descriptive statistics were used to describe the patient population. Area under receiver operating curve (AUC) was used to determine the predictive accuracy of existing pancreatitis scores.

Results: Ranson criteria, Glasgow-Imrie (GI) criteria, Bedside Index of Severity in Acute Pancreatitis (BISAP), and Harmless Acute Pancreatitis Score (HAPS) were assessed. GI criteria (AUC = 0.77) had the highest predictive accuracy for ICU admission, while Ranson criteria (AUC = 0.62) had the highest predictive accuracy for early discharge. Mean scores of ICU patients were significantly (p < 0.05) higher than those of non-ICU patients in all four scoring systems; however, mean scores in ICU patients failed to meet the severe case threshold for all four scoring systems.
**Discussion:** Existing pancreatitis scoring systems cannot consistently predict AP severity in ED patients. The small difference in mean ICU and non-ICU patient scores illustrates the difficulty of using scoring systems to stratify AP severity in the ED. Further efforts to develop an ED-specific scoring system could allow physicians to more efficiently admit patients.